

<b>Notice of Allowability</b>	<b>Application No.</b> 09/548,946 <b>Examiner</b> Nitin Parekh	<b>Applicant(s)</b> ESTACIO ET AL. <b>Art Unit</b> 2811
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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to 09-07-04.
  2.  The allowed claim(s) is/are 10-12 and 14-18.
  3.  The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
  4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a)  All      b)  Some\*      c)  None      of the:
      1.  Certified copies of the priority documents have been received.
      2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.
  - (b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 23.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

#### Attachment(s)

1.  Notice of References Cited (PTO-892)
2.  Notice of Draftperson's Patent Drawing Review (PTO-948)
3.  Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 23
4.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5.  Notice of Informal Patent Application (PTO-152)
6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7.  Examiner's Amendment/Comment
8.  Examiner's Statement of Reasons for Allowance
9.  Other \_\_\_\_\_.

Nitin Parekh  
Patent Examiner  
Technology Center 2800

## DETAILED ACTION

### ***Allowable Subject Matter***

1. Claims 10-12 and 14-18 are allowed.

### ***Examiner's Amendment***

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

#### A. Drawings:

The following changes to the drawings have been approved by the examiner and agreed upon by applicant:

- a. The reference numerals shown in all figures are not legible.
- b. The Fig. 1, 2 and 5 showing the copper clip, the bumped die and the solder paste respectively are not clear and are not of sufficient quality for publication.

In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

- B. Claim 10, line 3: Delete "including solder bumps" and insert --- "having solder bumps including source solder bumps and a gate solder bump" ---.
- C. Claim 10, line 4: Insert --- "source and gate" --- between "the" and "solder".

- D. Claim 10, line 4: Insert — “respectively” — after “connections”.
- E. Claim 10, line 6: Delete “a v-groove” and insert --- “an elongated v-groove along an edge of the lead rail”.
- F. Claim 10, line 7: Delete “in the v-groove” and insert — “in the elongated v-groove along the edge of the lead rail”.
- G. Claim 10, line 8: Delete “v-groove” and insert --- “elongated v-groove”.
- H. Claim 10, line 11: Delete “solder bumps” and insert --- “source solder bumps”.
- I. Claim 17, line 2: Delete “v-groove” and insert --- “elongated v-groove”.

Authorization for this examiner's amendment was given in a telephone interview with Patrick Jewik on 10-27-04.

#### ***Reasons for Allowance***

- 3. The following is an examiner's statement of reasons for allowance:

The references of record do not teach either singularly or in combination at least the limitations ” a copper clip attached to a backside of the bumped die and having an edge; a lead rail including leads and an elongated v-groove along an edge of the lead rail, wherein the edge of the copper clip is in the elongated v-groove along the edge of the lead rail” and “apertures in the leadframe and being located under the die and being between the source solder bumps” in a leadframe device having a bumped die wherein

drain connections between a die with a lead rail are accomplished through a soldered copper clip.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nitin Parekh whose telephone number is 571-272-1663. The examiner can normally be reached on 09:00AM-05:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on 571-272-1732. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9318.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

NP

10-27-04

*Nitin Parekh*  
NITIN PAREKH

PATENT EXAMINER

Technology Center 2800